AMPTHILL RURAL DISTRICT COUNCIL.

REPORTS

OF THE

MEDICAL OFFICER OF HEALTH

AND

INSPECTOR OF NUISANCES

FOR

THE YEAR 1904.

To the Chairman and Members
# of the
AMPTHILL RURAL DISTRICT COUNCIL

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present you with my Seventh Annual Report.

During the last year I do not think the population has altered to any appreciable extent, and I shall therefore retain the same figures for statistical purposes that I used in 1903, viz., those disclosed by the 1901 census. Flitwick and Aspley Guise have no doubt increased in population, but most probably all the other parishes have decreased or become stationary in the matter of inhabitants. These factors in my opinion about equalize one another.

As in previous years, the District will be divided into sub-districts, viz.: Ampthill, Cranfield, Shillington and Woburn.

I shall first of all deal with the total number of Deaths, and the respective Death Rates of the sub-districts, after which I shall proceed with the Births and Birth Rates.

Death Rates. The total number of Deaths in the entire District in 1904 amounted to 277, after allowances were made for those which occurred in the Workhouse at Ampthill (21), the Three Counties Asylum at Arlesey (6), and the Sanatorium for Consumptives at Aspley Heath (1). I have no knowledge of deaths having occurred in institutions elsewhere.

As the population is 19,146 it gives a general Death Rate of 14·4, which compares favourably with the previous year, when it was 15·4. As I mentioned last year, Death Rate is no absolute criterion of the health of the District. Zymotic and Infantile mortality are of greater importance. Our general Death Rate is much larger than it otherwise would be owing to the disproportionate number of aged people, amongst whom the mortality is high.

	Population.	No. of Deaths		Death Rate.		Zymotic Death Rate.		Phthisical Death Rate.		Infantile Mortality Rate	
		1903.	1904.	1903.	1904.	1903.	1904.	1903.	1904.	1903.	1904.
Ampthill	5,329	81	81	15·2	15·2	·93	·56	1·1	·93	3·1	3·1
Cranfield	2,727	37	39	13·5	14·3	·0	·36	1·8	1·4	4·0	4·0
Shillington	3,473	64	53	18·4	15·2	1·1	·28	1·7	·86	1·4	2·0
Woburn	7,617	114	104	14·9	13·6	·13	·26	·65	1·3	1·7	1·8

The Zymotic Death Rate of the entire District is ·36
The Phthisical ,, ,, is 1·1
The Infantile Mortality ,, is 2·2

As the number of Deaths under 1 year af age was 44, and the Births 438, this shows that out of every 1,000 Births 100·2 died; this compares favourably with last year, when the number per 1,000 was 108·2. Premature births account for only 5 infantile deaths.

The following list shows the number of Deaths in each sub-district from the seven chief Zymotic diseases :—

	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Whooping Cough.	Zymotic Diarrhœa
Ampthill				1		1	1
Cranfield						1	
Shillington ..						1	
Woburn							2
				1		3	3

There have been in the whole District :

44 deaths under 12 months.
10 ,, between the ages of 1 and 5 years.
5 ,, ,, 5 ,, 15 ,,
7 ,, ,, 15 ,, 25 ,,
75 ,, ,, 25 ,, 65 ,,
136 ,, in persons over 65 years.

As usual, nearly one half attained the age of 65 years. Amongst the deaths I noticed that of a woman at Potsgrove aged 103. I mention this matter as I have not previously had the death of a centenarian brought to my notice from this district.

The deaths from Cancer amounted to 24, which is a considerable increase on last year, when 18 were recorded. They are thus distributed in the sub-districts, viz.: Ampthill, 7; Cranfield, 3; Shillington, 6; Woburn, 8. As soil is supposed by some to be a predisposing factor in the causation of this disease, I give the soils and sub-soils of the various parishes in which the cases occurred. I also append the number of cases in the affected parishes. Personally I think the influence of soil is infinitesimal, and one that may almost be disregarded. I believe no scientific reason which will stand strict examination has been brought forward in support of this influence. It relies almost entirely on statistics which are often very deceptive.

(*a*) *Clophill*—3 cases. Soil, principally sand; subsoil, gravel.
(*b*) *Cranfield*—2 cases. Soil and subsoil, clay.
(*c*) *Flitton*—2 cases. Soil, sand; subsoil, sandstone.
(*d*) *Flitwick*—1 case. Soil, light gravel; subsoil, sand.
(*e*) *Gravenhurst*—1 case. Soil, clay; subsoil, varied.
(*f*) *Houghton Conquest*—2 cases. Soil and subsoil, clay.
(*g*) *Marston Moretaine*—1 case. Soil and subsoil, clay.
(*h*) *Pegsdon (in the Parish of Shillington)*—1 case.
(*i*) *Shillington*—1 case. Soil and subsoil, clay.
(*j*) *Maulden*—2 cases. Soil, part sand part clay; subsoil, clay.

(*k*) *Tingrith*—1 case. Soil, marl, clay and sand; subsoil, gravel.
(*l*) *Toddington*—5 cases. Soil, marl and clay; subsoil, gravel.
(*m*) *Woburn*—1 case. Soil, sand; subsoil, gravel.

The following were the organs affected:

Breast ...	2	Aesophagus ...	1
Stomach ...	5	Kidney ...	1
Liver ...	4	Pancreas ...	1
Uterus ...	3	Bowel ...	1
Lip ...	1		

In five cases the organ affected was not defined on the death certificates, but only the region in which the growths occurred.

Influenza has again made its appearance amongst us, but the disease has only been of a mild form. Three deaths have however occurred, but these have been in people over 65 years of age.

Phthisis as usual accounts for several deaths, 22 having succumbed to this disease, a number which exactly equals that of last year. All houses in which a death occurs from this disease are disinfected, and printed instructions containing the measures that ought to be adopted in order to prevent infection are distributed whenever I become aware of any case.

The deaths from disease of the Respiratory Organs, exclusive of Phthisis, amounted to 43, which is a slight increase on last year, when 41 were recorded.

Births and Birth Rates.—The total number of Births in the entire District was 438, which shows an increase on last year, when 425 were recorded. This gives a rate of 22·87.

The Births and Birth Rate of each sub-district are:—

	Number of Births.		Birth Rates.	
	1903.	1904.	1903.	1904.
Ampthill	137	135	25·7	25·3
Cranfield	72	63	26·4	23·1
Shillington	73	84	21·0	24·1
Woburn	143	156	18·7	20·4

The sub-district of Woburn still has the lowest rate, but not as low as last year, when a phenomenal figure was reached.

I now come to the Zymotic diseases, and am glad to be able to report that the number of notifications still keeps very low; 77 were received, which is a slight increase on 71 of the previous year, which was considered a low number.

Diphtheria.—Cases of this disease have occurred in the parishes of Houghton Conquest, Clophill and Shillington. Sixteen out of the 19 cases recorded occurred in the former parish, and had the epidemic reached slightly larger proportions, I should have deemed it necessary to make a Special

Report. The first of this series of 16 cases occurred on January 6, and I was unable to discover its origin. Although there were several children in the house, no other case occurred on these premises. On January 31st a case occurred in a house situated three doors away from Case No. 1, and in my opinion no doubt derived its origin from it. From February 1st to February 6th four other cases occurred, and I think I am quite right in assuming that these were contracted from either Nos. 1 or 2, especially as one lived in the same house as No. 2. No other cases occurred during February, and I had every hope the disease was stamped out, but on March 2nd I received a notification of another case. One additional case occurred during March, and as four more were brought to my notice during April, I decided to close the School for a period of three weeks. Two more cases occurred during May, and an additional two in June, then the epidemic subsided. No doubt the disease was spread by personal contact, as sanitation or milk supply had nothing to do with the matter. Sanitation in this village is seriously hampered by the very limited curtilage attached to several of the houses, a large number having been built on the "road waste." The cases of Diphtheria at Shillington were imported ones.

ERYSIPELAS.—Nearly one half of the notifications are due to this disease. I am quite certain its notification in rural districts is absolutely useless.

ENTERIC FEVER.—Cases of this disease have occurred in the following parishes, viz., Clophill, Flitton (Greenfield), Maulden, Toddington (Chalton), and Shillington (Pegsdon and Lower Stondon). Three cases occurred in one house at Chalton, and no doubt the impurity of the water supply caused this outbreak. In nearly all the other cases an impure water supply was found, and was a very possible factor in the causation of the disease.

MUMPS.—In contrast to last year we have had several outbreaks of this disease. Epidemics have occurred in the following villages, viz., Clophill, Cranfield, Flitwick, Harlington, Haynes, and Shillington. In some instances I deemed it advisable to close the Schools, but am very doubtful of its utility in staying the progress of the disease, which is essentially a mild one, and entails no risk to life. The parents recognize this, and directly the children are convalescent they are allowed to run about and mix with others—thus the disease is spread. From experience during the past year, I am certain that the spread of this disease has been quite as rapid when the Schools have been closed as when they have been open. Under these circumstances it seems useless to recommend closure. Of course I only look at it from a sanitary point of view, not from that of school attendance, which is the main standpoint from which most school committees look at the matter.

SCARLET FEVER.—Cases of this disease have occurred in the following parishes, viz., Aspley Guise, Flitton, Gravenhurst, Marston Moretaine, Houghton Conquest, Shillington (Lower Stondon), Silsoe, and Toddington. The disease has been of a very mild character, and has shown very little tendency to spread.

PUERPERAL FEVER.—Only one case has occurred, and that at Shillington.

MEASLES.—Epidemics of this disease have occurred in the following parishes, and in each case I deemed it advisable to close the Schools, viz., Aspley Guise, Aspley Heath, and Ridgmount.

WHOOPING COUGH.—There has been no epidemic of any magnitude during the year.

ZYMOTIC DIARRHŒA.—This year three deaths were recorded, which compares unfavourably with last year, when there was a *nil* record. The difference is to be accounted for by the higher temperature and lower rainfall of the last twelve months compared with that of 1903.

Small-pox.—Again luck has been with us, as no case has been brought to my notice.

The following notifications under the Infectious Diseases Notification Act have been received :—

District	Disease	Cases	Total
Ampthill	Diphtheria......	16	34
	Enteric	1	
	Erysipelas	12	
	Scarlet Fever...	5	
Cranfield	Erysipelas......	4	5
	Scarlet Fever	1	
Shillington	Diphtheria......	3	31
	Enteric	5	
	Erysipelas......	15	
	Scarlet Fever...	7	
	Puerperal Fever	1	
Woburn	Enteric	3	7
	Erysipelas	2	
	Scarlet Fever ...	2	

I now mass the cases of the entire District together, and give the seasons of the year in which they occurred :—

1st Three Months	2nd Three Months.	3rd Three Months.	4th Three Months.
Diphtheria 8	Diphtheria 8	Diphtheria 2	Diphtheria 1
Enteric 5	Enteric Fever 2	Enteric Fever 2	Erysipelas 9
Erysipelas 8	Erysipelas 8	Erysipelas 8	Scarlet Fever 7
Scarlet Fever 5	Scarlet Fever 1	Puerperal Fever 1	
		Scarlet Fever 2	
26	19	15	17

As I mentioned last year, disinfectants and printed instructions are supplied gratuitously to all cases of infectious notifiable disease, and at the end of the illness the room which the patient occupied is thoroughly disinfected ; this also is done free of charge. In addition to the above diseases, houses where deaths from Phthisis and Cancer have occurred are disinfected, although the general opinion amongst experts is that the latter disease is not infectious. Schools are disinfected after all outbreaks of infectious disease. The cost of School disinfection is paid by the County Council.

The Rainfall is again included for reasons which I have given in previous reports.

Jan. in.	Feb. in.	Mar. in.	Apl. in.	May in.	June in.	July in.	Aug. in.	Sept. in.	Oct. in.	Nov. in.	Dec. in.
2·121	2·495	1·342	1·030	1·453	·742	·5505	2·076	1·125	1·156	1·530	1·820

Total for the year ... 20·4405 inches.

This is about three inches under the average, and over thirteen inches less than the previous year, when an abnormal amount was recorded. The above was taken at Shillington by myself with a 5in. gauge. Height above sea level, 182 feet.

Water Supply.—Few cases of shortage have occurred during the last twelve months, and for this we have to thank 1903 for its phenominally heavy rainfall. It is in regard to quality rather than quantity that we have to complain. As long as we take no steps to protect our wells from surface pollution, we must expect this condition of things to last. Wells for the most part are sunk in gardens or in land which is in close proximity to cultivated areas; after manuring, followed by a heavy fall of rain, the water cannot fail to become polluted unless the walls of the well are rendered impermeable. Several houses in Mill Lane, Houghton Conquest, are badly in need of water, as at present the tenants have to go four or five hundred yards for their supply.

SEWAGE AND REFUSE DISPOSAL.

I am glad to be able to announce that the system of Sewage and Water Supply for Aspley Guise, Aspley Heath, and an adjoining portion of the Newport Pagnell Union, has made progress during the year, as the position in regard to water supply is now quite safe, and an ample and pure supply is assured for many years to come. Last year I mentioned that boring trials had taken place at Birchmoor Farm, and that after 43 feet had been penetrated a layer of rock 7 feet in thickness was encountered. Boring was continued 200 feet below this through water bearing sand, and there was not much doubt of its sufficiency for our requirements. Since then the following progress has been made—a well, 5 ft. in diameter, was sunk for a depth of 43 feet, until the lower green sandstone rock was reached. Water at once rose through the borehole (which had previously been made) to within 18 feet 9 inches from the surface. The pumping test was then resorted to, the minimum rate specified being 10,000 galls. per hour, and kept up continuously for 14 days. After seven days' pumping, a pulsometer pump was used, but it was found the boiler could not supply sufficient steam to enable the pump to deliver much beyond the contract test of 10,000 galls. per hour. Previous to pumping, the level of three adjoining private wells was taken, and at the end of the operation this was not lowered in the least, so there is not much doubt that the majority of the water for our supply comes from beneath the sandstone rock. The maximum reached during the pumping of the last seven days was 301,000 galls. per day, and the minimum 284,000, but Messrs. Balfour are of opinion that 20,000 galls. per hour might have been pumped without reducing the water level to any great extent. Assuming that the population to be supplied is 5,000, and taking 20 galls. per head as an average consumption, we get an average daily requirement of 100,000 gallons. Adding to this the 30,000 galls. required by His Grace the Duke of Bedford for Woburn, the daily requirement is 130,000 galls. If we look at it from the most pessimistic point of view, and take the minimum test pumping day, viz., 240,000 galls., we get a surplus of 110,000 galls. over our present requirements. We are therefore safe for a considerable number of years, even if the population increases at a much more rapid rate than it has during recent years.

Samples were taken on three separate occasions, and submitted to Sir Thos. Stevenson. The analyses of all were very similar, and I will therefore only give the result of the last one taken :—

Analysis.

It contained and yielded in grs. per gallon—

Total Solid Matter	8·40
Loss on ignition	1·40
Combined Chlorine	1·14
Equal to Common Salt	1·88
Iron in solution	almost *nil*
Nitrogen as Nitrates	0·10

Nitrates	none
Ammonia	0·001
Albuminoid Ammonia	0·0035
Oxygen required to oxidise the organic matter	0·027
Hardness in degrees—	
Temporary	1·8
Permanent	1·0
	2·8

The action of the water on lead was found to be almost *nil.*

There is no doubt this is a water of excellent quality, and in addition has the virtue of being exceedingly soft.

Nothing has been done in regard to re-sewering Woburn, and I therefore presume that the Committee which was appointed to look into this matter are waiting until they get a public water supply.

The following places in my opinion would be improved by a system of Scavenging, viz., Aspley Guise, Aspley Heath, and Woburn.

New Sewers have been laid at Shillington, Westoning and Toddington. In addition to this, improvements to existing sewers have been carried out at Cranfield, Eversholt, Harlington, Lidlington, Shillington, Toddington and Westoning.

NUISANCES.

The construction of pigsties, and also their condition, have been specially looked into, as these are often a fertile source of nuisance. An immense number of nuisances of all kinds have been grappled with during the year, as a perusal of your Inspector's Report shows.

Administration of the Factories & Workshops Act, 1901, for the year 1904.

REPORT.

As a preliminary, I repeat what I said last year in regard to our duties. These are mainly confined to Workshops and Workplaces, although District Councils are supposed to see that all Factories and Workshops employing more than 40 persons are furnished with reasonable means of escape in case of fire; and as the Public Health Amendment Act, 1890, is in force in this District, the responsibility of seeing that they are provided with proper and sufficient sanitary conveniences also rests with us. Domestic factories are entirely under our control.

FACTORIES.

The Powage Printing Works is the only factory we have. About 50 people are employed here, and the majority are of the male sex.

Sanitary Conveniences.—Sufficient are provided, and the closets for the different sexes are completely separated.

Last year I mentioned that no provision was made in case of fire, and owing to some misunderstanding, I am sorry to say this matter has not yet been attended to. I am glad to announce that this is now being taken in hand, and most probably in a short time the deficiency will be made good.

DOMESTIC FACTORIES.

One only, and that at Pulloxhill. Printing is the industry, and only two persons are employed. No sanitary defects were discovered.

WORKSHOPS.

A register has been kept. The Workshops in this District are—bakehouses, slaughter-houses, dairies, and houses where hat-sewing and dressmaking are carried on.

I will commence with retail bakehouses. We have one or more of these in the following parishes, viz., Aspley Guise, Clophill, Cranfield, Eversholt, Flitwick, Gravenhurst, Harlington, Haynes, Houghton Conquest, Husborne Crawley, Lidlington, Marston Moretaine, Maulden, Pulloxhill, Ridgmont, Shillington, Silsoe, Toddington, Westoning and Woburn. In all there are 47 bakehouses in the District. Retail bakehouses must comply with the sanitary requirements of ordinary workshops, with the addition of the following :—

(1) No water closet, earth closet, privy, or ashpit must be within or communicate with the bakehouse. Every cistern supplying water to the bakehouse must be separate and distinct from any cistern for supplying water to a water closet. No drain or pipe for carrying off fæcal or sewage matter must have an opening within the bakehouse.

(2) The inside walls and ceilings of the rooms of the bakehouse, the passages and staircases, must be either oil-painted and varnished, or limewashed, or partly both. In the case of paint, it must be renewed every seven years, and washed every six months. In the case of limewashing, it must be done every six months.

All the defects mentioned in No. 1 were, I believe, eliminated some years prior to the passing of this Act. In regard to No. 2, the cleanliness of the walls is rigidly enforced.

UNDERGROUND BAKEHOUSES.

Last year I mentioned we had only one, and that at Westoning. All the suggestions made were carried out, and a certificate was granted. This has been kept in a fairly good state, but on one occasion the floor was found to be in a dirty state, and on another the ceiling defective.

I think on the whole our bakehouses reach a fairly high standard, and the tenants make reasonable endeavours to keep the premises in a cleanly state.

SLAUGHTER-HOUSES.

We have houses of this character in the following parishes, viz., Aspley Guise, Aspley Heath, Clophill, Cranfield, Eversholt, Flitton, Flitwick, Houghton Conquest, Husborne Crawley, Lidlington, Marston Moretaine, Maulden, Pulloxhill, Ridgmont, Shillington, Silsoe, Toddington, Westoning, and Woburn. In all there are 43 slaughter-houses, a number slightly less than the bakehouses. Some are fairly satisfactory, especially those recently built, but several consist of sheds, which were originally not intended for the purpose, these being by no means what they ought to be. The floors of the latter places for the most part consist of bricks set on the earth and held together by mortar. The result is the bricks sink in places, making the floor uneven, in addition mortar gets washed out and allows liquids to percolate. The floor of a slaughter-house is the most important part, and ought to be made impermeable to liquids, and the surface drained so that blood can run away quickly.

Bye-laws for Slaughter-houses have been adopted in the parishes of Cranfield, Marston Moretaine, Maulden, Shillington, and Toddington. In my opinion Flitwick, Aspley Guise and Woburn ought to be added to the list, especially the former, as it is a very important village, and is increasing in population at a faster rate than any other parish in the District.

DAIRIES, COWSHEDS, AND MILKSHOPS.

Regulations under the Dairies and Milkshops Order are in force. The number of persons registered who are subject to inspection is 107, and defects were discovered in 41 of these, or nearly one-third of the whole. Mr. Foster informs me that he has paid special attention to the condition of the walls and floors. The condition of a considerable number of these premises is not what it ought to be, and is certainly not what the Aylesbury and other similar large companies require. I must say however that there is a gradual improvement taking place.

Hat-Sewing.—This industry is rapidly dying out in rural districts, and will I believe soon disappear if machinery is not introduced in order to put them on a par with the towns. This work is only carried on during a small portion of the year, viz., during the Spring and early part of Summer. There is not much fault to be found with the premises themselves, and the industry is of a very cleanly character, but there is sometimes a considerable amount of overcrowding, and this of course ought to be put a stop to. Gravenhurst, Toddington and Westoning are the only parishes where this industry is carried on.

Dressmaking.—Last year Toddington and Shillington were the only parishes mentioned where this industry was carried on, but I have since discovered that this class of work is being done in Fllitwick and Salford.

Sanitation.—Most of the places are kept clean.

OUT-WORKERS.

These are almost entirely confined to hat-sewing. They reside in the parishes of Flitwick, Gravenhurst, Harlington, Maulden, Shillington, Toddington, and Westoning. The houses are on the whole kept clean.

WORKPLACES.

These are not periodically inspected, as we have nothing of importance, but should any nuisance be brought to our notice the matter is attended to at once.

HOUSING OF THE WORKING CLASS ACT.

A closing order was made in the case of a couple of houses at Houghton Conquest, which were in a deplorable state.

The following Acts, Bye-laws, and Regulations are in force in this District :—

Infectious Disease Prevention Act, 1890.
Part III. of the Public Health Amendment Act, 1900.
Building Bye-laws in respect to New Streets and Buildings.
Regulations under the Dairies and Milkshops Order of 1885.
Bye-laws in regard to Slaughterhouses for the following parishes, viz., Cranfield, Marston, Maulden, Shillington and Toddington.

VACCINATION.

I now come to this important subject, and hoped to be able to announce that a new Bill had been passed by Parliament, introducing re-vaccination and other important alterations of the present Act, but such, I am sorry to say, is not the case.

The total number of Vaccinations in the entire district was 321, compared with 294 in 1903.

I will now give the Births and Vaccinations for each sub-district :—

	Births.	Vaccinations.
Ampthill	135	102
Cranfield	63	40
Shillington	84	69
Woburn	156	120

This gives a percentage of 73·2 on the total number of Births, which compares favourably with 69·1 of the previous year.

As the promised New Act has not been passed, I again mention the alterations I think necessary to increase the efficiency of the one now in force. In addition to those I mentioned last year I beg to add several others.

1. Compulsory re-vaccination at or about the age of 12. This precaution has almost entirely stamped out Small-pox in Germany, and it is extremely rare for attendants at Small-pox hospitals (who are compelled to be re-vaccinated) to contract the disease.

2. All medical men should be made public vaccinators. This would bring every vaccinator under government control, and thus a standard of efficiency could be applied to all. In addition it would remove a strong prejudice which the poor have against having their children attended by a strange doctor, and thus would lead to a larger number of vaccinations.

3. The guaranteeing or standardisation of calf lymph by the Local Government Board, and its supply on demand to every medical practitioner.

4. The standardising, or defining, by the Local Government Board of so-called efficient vaccination.

5. The compulsory vaccination and re-vaccination of all persons in a dwelling house wherein Small-pox has broken out.

6. Legislative powers to enable Sanitary Authorities to expend public funds in promoting re-vaccination by recompensing the wage earner of a family should he be laid up after this operation. It is not an uncommon thing for an adult to be laid up for two or three days, and it is very often the fear of this which prevents him being operated on. No doubt the payment of his wages during that period would remove his objection.

HOSPITAL ACCOMMODATION.

Small-pox. This hospital has been removed from Maulden to its new site at Steppingley, and water has been laid on to it from the Gipsy Lane spring.

Hospital for General Infectious Diseases. In my last Report I mentioned that a L.G.B. Inspector was sent down during December, 1903, to hold a public inquiry. In addition he visited the site and the source of the proposed water supply. He agreed that the site was a suitable one, and made certain suggestions, which this Council were willing to carry out. Having mentioned them in my last Report, I do not think it necessary to repeat them now, with the exception of the proposed water supply. I informed the Inspector that I had analysed the water on two separate occasions (one being after a period of dry weather, and the other after a heavy rainfall), and found it to be one of extreme purity. A visit to the source did not prepossess him, and I am not surprised, as the water came out of a pipe situated in a ditch, which was strongly suggestive of surface drainage. The first time I visited this spot created a similar impression, but the result of my two analyses was almost conclusive that the water came from beneath an impermeable stratum. The Inspector suggested that my analysis should be verefied by a competent analyst, and a sample was sent to Sir Thos. Stevenson. The result of his analysis was, I am glad to say, practically a repetition of mine, and the water was pronounced fit for drinking purposes. The spring was traced underground, as so much depended on this whether it was liable at any time to become contaminated. The result of the excavation showed that after digging through about a foot of loam a stiff layer of clay about 5 feet in thickness was encountered, beneath this was a layer of sand 1 foot 6 inches, and it is from this that we intend taking our supply. I think we may safely rely upon the 5 feet of clay to protect our supply from surface pollution. In regard to the buildings themselves, I am glad to say they are well on their way towards completion, and I believe the contract expires about the middle of October next.

In conclusion, I think you will agree, after having read our Reports, that a considerable amount of sanitary progress has been made during the year.

Acreage (exclusive of area covered by water), 68,195.

Census population, 19,146. Density of population, 1 person to 3·5 acres.

I have the honour to be, Ladies and Gentlemen,
Your obedient Servant,
KILHAM ROBERTS, M.O.H.

Ampthill Rural District Council.

Annual Report of the Sanitary Inspector for the Year 1904.

Summary of Defects and other matters dealt with during the year :—

1.	Nuisances caused by Defective and Insufficient Closets	75
2.	,, ,, ,, Ashpits	45
3.	,, ,, ,, Drains	100
4.	,, ,, ,, Urinals	2
5.	,, Damp Premises	12
6.	,, Accumulations of Offensive Matter	71
7.	,, Defective Pigsties	10
8.	,, Overcrowding	13
9.	,, Defective Yard Pavings	5
10.	Dwellings Cleansed and Limewashed	19
11.	,, with Insufficient Light or Ventilation	20
12.	,, in a Dilapidated State and Spouting required to Eaves	49
13.	,, with Defective and Insufficient Water Supply	8
14.	Wells Repaired and Cleansed	6
15.	New Houses received Water Certificates	47
16.	Samples of Water Tested	61
17.	Rooms Disinfected after Infectious Diseases	39
18.	Schools Disinfected after Whooping Cough, Measles, &c.	6
19.	Rooms ,, Consumption	12
20.	,, ,, Cancer	13
	Total number of Cases dealt with	613
	,, for 1903	619

The above 613 Cases were in connection with 550 Premises (approximately).

Number of Notices served under various Sections	18
,, Complaints received	57
,, Proceedings taken	3

PAROCHIAL WORK.

Sewerage. New Sewers have been laid for surface and slop water at

Cranfield. Bury End, Shillington. Main Road, Westoning. Dunstable Road, Toddington.

The Outfall of the Main Sewer at Westoning is being extended; and plans have been prepared for a new length of Sewer in the parish of Pulloxhill, this is to be laid shortly.

Improvements to existing Sewers have been carried out in the following parishes :—

Toddington. Westoning. Cranfield. Harlington. Eversholt. Lidlington. Shillington.

The Sewage Tanks and Ditches have been emptied and cleansed from time to time as required, and the Sewers flushed with a flushing van.

Toddington Parochial Committee. The following is a summary of the work carried out by the Contractors during the year as compared with last year :—

	Number Emptied.		Average Cost.					
	1903.	1904.	1903.			1904.		
			£	s.	d.	£	s.	d.
Closet Vaults	440	482	0	2	2⅛	0	2	3
Closet Pails	4880	7359	0	0	1⅛	0	0	1⅛
Ashpits	91	186	0	2	11	0	2	9⅛
Ashbins (about)	153	304	0	0	3	0	0	2
	5564	8331						

Total no. of Loads removed (not including 4224 pails at Chalton) in 1904	711			
Ditto in 1903	666			
Total cost, including establishment expenses, in 1904		103	19	10
Ditto in 1903		104	14	8
Average cost per week in 1904		2	0	0
Ditto in 1903		2	0	3¼

The men were engaged in the above work 27 days and 156 nights.

HOUSE TO HOUSE INSPECTION.

The parish of Shillington has been inspected in the usual way as far as time would permit, but as the inspection is not quite complete details will be given in the next report.

WORKSHOPS.

The following are the particulars of these premises :—

Number at present on Books	112
,, Inspected	253
,, requiring to be Repaired and Cleansed	71

Lists of Out-workers have been received from time to time and entered in the books.

Byelaws for Slaughterhouses have been adopted in the parishes of

Maulden. Toddington. Shillington. Marston. Cranfield.

DAIRIES, COWSHEDS, AND MILKSHOPS.

Number of Persons Registered	121
,, Discontinued the Trade or Exempt	14
Number subject to Inspection	107
,, at which Defects have been Reported	41

Special attention has been paid to cleanliness of internal surfaces, and also the provision of brick or concrete floors, and channels in the external air to carry off the liquids.

The approximate number of cows milked is 1,117.

OFFICE WORK.

The following is a list of the Books and Forms now used in my Office :—

Report Book. Continuous Journal. House to House Inspection Books. Complaint Book. Cash Book. Order Book. Letter Books (2). Notice Books (9). Forms and Circulars (21).

Dairies and Cowsheds. Register of Premises. Inspection Book. Certificate Book.

Factories and Workshops. Register of Premises. Inspection Book. Register of Outworkers. Register of Slaughterhouses.

SUMMARY.

	Defects.	Premises.
Nuisances, &c.	613	550
Workshops	71	112
Dairies and Cowsheds	41	85
Totals	725	747
Totals for 1903	707	621

NEW BUILDINGS, &c.

The following Plans have been received during the year :—

New Houses, Workshops, &c.	51
New Roads	3
Additions to Houses, &c.	32
Total	86
Total for 1903	100

Ampthill,
20th January, 1905.

LEONARD FOSTER,
Inspector.

TABLE I.

AMPTHILL RURAL DISTRICT.

Vital Statistics of Whole District during 1904 and Previous Years.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				DEATHS IN PUBLIC INSTITUTIONS.	Deaths of Non-residents registered in Public Institutions in District.	Deaths of Residents registered in Public Institutions beyond the District.	NET DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
				Under 1 Year of Age.		At all Ages.						
		Number.	Rate.*	Number.	Rate per 1000 Births registered.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	12726	328	25·7	45	137·1	192	14·9			9	201	15·7
1895	12726	344	27·0	30	87·2	175	13·75			7	182	14·3
1896	12726	304	23·9	25	82·2	164	12·86			9	173	13·5
1897	12726	305	23·9	32	104·9	189	14·3			7	196	15·4
1898	12726	280	22·0	44	157·1	170	13·35			11	181	14.2
1899	12726	313	24·5	29	92·6	193	15·1			4	197	15·4
1900	20635	460	22·2	49	106·5	297	14·3			16	313	15·1
1901	19146	479	25·01	40	83·5	286	14·9			14	299	15·6
1902	19146	446	23·35	27	60·5	256	13·37			25	281	14·6
1903	19146	425	22·19	46	108·2	275	14·3	1	1	22	296	15·4
Averages for years 1894–1903	15442·9	368·4	23·97	36·7	101·9	219·7	14·11	·1	·1	12·4	231·9	14·9
1904	19146	438	22·87	44	100·4	251	13·1	1	1	27	277	14·4

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public institutions" to be taken into account for the purposes of these Tables are those in to which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums. A list of the Institutions in respect of the deaths in which corrections have been made should be given on the back of this Table.

Area of District in acres (exclusive of area covered by water). } 68,195.

Total population at all ages 19,146
Number of inhabited houses 4,729
Average number of persons per house ... ... 4·04
} At Census of 1901.

SEE OVER.

I. Institutions within the District receiving sick and infirm persons from outside the District.		II. Institutions outside the District receiving sick and infirm persons from the District.		III. Other Institutions, the deaths in which have been distributed among the several localities in the District.
A Sanatorium for Consumptives, at Aspley Heath ...	1	Ampthill Workhouse ...	21	*Nil.*
		Three Counties Asylum ...	6	

Is the Union Workhouse within the District ? *No.*

TABLE II.

AMPTHILL RURAL DISTRICT.

Vital Statistics of separate Localities in 1904 and previous years.

NAMES OF LOCALITIES	AMPTHILL.				CRANFIELD.				SHILLINGTON.				WOBURN.			
YEAR.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a	*b*	*c*	*d*	*a*	*b*	*c*	*d*	*a*	*b*	*c*	*d*	*a*	*b*	*c*	*d*
1894 ...	5671	149	94	22	3012	74	45	8	4043	105	62	15				
1895 ...	5671	161	92	17	3012	79	34	4	4043	104	56	9				
1896 ...	5671	138	81	12	3012	75	45	4	4043	91	47	9				
1897 ...	5671	133	104	14	3012	78	44	6	4043	94	49	12				
1898 ...	5671	138	87	25	3012	60	47	6	4043	82	50	13				
1899 ...	5671	141	102	20	3012	75	44	6	4043	97	49	3				
1900 ...	5671	134	78	13	3012	71	48	10	4043	93	45	7	7909	162	142	19
1901 ...	5329	141	87	19	2727	72	37	3	3473	97	61	5	7617	169	114	13
1902 ...	5329	140	79	9	2727	63	44	4	3473	77	45	2	7617	168	113	12
1903 ...	5329	137	81	17	2727	72	37	11	3473	73	64	5	7617	143	114	13
Averages of Years 1894 to 1903.	5568·4	141·2	88·5	16·8	2926·5	71·9	42·5	6·2	3872	91·3	52·8	8	7690	160·5	120·7	14·2
1904 ...	5329	135	81	17	2727	63	39	6	3473	84	53	7	7617	156	104	14

NOTES.—(*a*) The separate localities adopted for this table should be areas of which the populations are obtainable from the census returns, such as wards, parishes or groups of parishes, or registration sub-districts. Block 1 may, if desired, be used for the whole district: and blocks 2, 3, &c., for the several localities. In small districts without recognised divisions of known population this Table need not be filled up.

(*b*) Deaths of residents occurring in public institutions beyond the district are to be included in sub-columns *c* of this table, and those of non-residents registered in public institutions in the district excluded. (See note on Table I. as to meaning of terms "resident" and "non-resident.")

(*c*) Deaths of residents occurring in public institutions whether within or without the district, are to be allotted to the respective localities, according to addresses of deceased.

TABLE III.

AMPTHILL RURAL DISTRICT.

Cases of Infectious Disease notified during the Year 1904.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.				NO. CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.			
	At all Ages.	At Ages†—Years.						1	2	3	4	1	2	3	4
		Under 1	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards	Ampthill	Cranfield	Shillington	Woburn				
Small-pox													*None.*		
Cholera															
Diphtheria	19		3	9	3	4		16		3					
Membranous croup ...															
Erysipelas	33		3	6	6	13	5	12	4	15	2				
Scarlet fever	15		3	9	2	1		5	1	7	2				
Typhus fever															
Enteric fever	9		1	4	2	2		1		5	3				
Relapsing fever															
Continued fever															
Puerperal fever	1					1				1					
Plague															
*															
Totals	77							34	5	31	7				

NOTES.—The localities adopted for this table should be the same as those in Tables II. and IV.

State the name of the isolation hospital, if any, used by the sick of the district. Mark (H) the locality in which it is situated, or if not within the district, state where it is situated, and in what district.

* This space may be used for record of other disease the notification (compulsory or voluntary) of which is in force in the district.

† These age columns for notifications should be filled up in all cases where the Medical Officer of Health, by inquiry or otherwise, has obtained the necessary information.

Isolation Hospital for General Infectious Diseases. One in course of construction at Steppingley.

Small-pox. A small building at Steppingley, with accommodation for six cases.

Causes of Death.	All ages.	Under 1	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Ampthill	Cranfield	Shillington	Woburn
Small-pox											
Measles											
Scarlet fever											
Whooping-cough	3	1	2					1	1	1	
Diphtheria and membranous croup	1			1				1			
Croup											
Fever { Typhus											
Fever { Enteric											
Fever { Other continued ...											
Epidemic influenza	3						3			1	2
Cholera											
Plague											
Diarrhœa. (*See* notes at back.)	3	2					1	1			2
Enteritis. (*See* notes at back.)	6	3				2	1		2	2	2
Puerperal fever	1					1				1	
Erysipelas											
Other septic diseases	1					1				1	
Phthisis (Pulmonary Tuberculosis)	19		1		6	12		4	4	3	8
Other tubercular diseases ...	3		2			1		1			2
Cancer, malignant disease ...	24					13	11	7	3	6	8
Bronchitis	30	5	3			6	16	9	2	3	16
Pneumonia	12	5	1			4	2	2	1	3	6
Pleurisy	1					1		1			
Other diseases of Respiratory organs											
Alcoholism Cirrhosis of liver }											
Venereal diseases											
Premature birth	5	5						5			
Diseases and accidents of parturition											
Heart diseases...	33					11	22	9	7	6	11
Accidents	5	1		1		1	2	2		2	1
Suicides	2					2					2

Notes.—(*a*) In this Table all deaths of "Residents" occurring in public institutions, whether within or without the district, are to be included with the other deaths in the columns for the several age groups (columns 2–8). They are also, in columns 9–15, to be included among the deaths in their respective "Localities" according to the previous addresses of the deceased as given by the Registrars. Deaths of "Non-residents" occurring in public institutions in the district are in like manner to be excluded from columns 2–8 and 9–15 of this Table.

(*b*) *See* notes on Table I. as to the meaning of "Residents" and "Non-residents," and as to the "Public Institutions" to be taken into account for the purposes of these Tables. The "Localities" should be the same as those in Tables II. and III.

(*c*) All deaths occurring in public institutions situated within the district, whether of "Residents" or of "Non-residents," are, in addition to being dealt with as in note (*a*), to be entered in the last column of this Table. The total number in this column should equal the figures for the year in column 9, Table I.

(*d*) The total deaths in the several "Localities" in columns 9–15 of this Table should equal those for the year in the same localities in Table II., sub-columns *c*. The total deaths at all ages in column 2 of this Table should equal the gross total of columns 9–15, and the figures for the year in column 12 of Table I.

(*e*) Under the heading of "Diarrhœa" are to be included deaths certified as from diarrhœa, alone or in combination with some other cause of ill-defined nature; and also deaths certified as from

Epidemic enteritis;
Zymotic enteritis;
Epidemic diarrhœa. Summer diarrhœa;
Dysentery and dysenteric diarrhœa;
Choleraic diarrhœa, cholera, cholera nostras (in absence of Asiatic cholera).

Under the heading of "Enteritis" are to be included those certified as from Gastro-enteritis, Muco-enteritis and Gastric catarrh, unless from information obtained by enquiry from the certifying practitioner or otherwise, the Medical Officer of Health should have reason for including such deaths, especially those of infants, under the specific term "Diarrhœa."

Deaths from diarrhœa secondary to some other well-defined disease should be included under the latter.

Under the headings of "Cancer" and "Puerperal fever" should be included all registere deaths from causes comprised within these general terms.

In recording the facts under the various headings of Tables I., II., III. and IV., attention has been given to the notes on the Tables.

KILHAM ROBERTS,
Medical Officer of Health.

January 13th, 1905.